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CONTENT

A Comparative Analysis of Net Fiscal Deficit for Development Before and After the New Economic Policy

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Abstract
"How far has the fiscal deficit been used for the development purpose in the country since 1981 till now?" is the main focus area of the following paper. It does so through a comparative analysis of the relation between the net fiscal deficit and the development expenditure – before and after the New Economic policy. Time period before the NEP is taken from 1981 to 1991 and for that after NEP, 1992-2023. Previous studies have relied on the data either before NEP or after it, but a comparative analysis, like this paper shows, has not been visible there. The paper uses the trend and regression analysis for measuring the relation and use of Fiscal deficit for the development expenditure. Results show that after NEP, a significant amount of fiscal deficit is used for development purposes as compared to the time frame before the reform.

Keywords: Net fiscal deficit, development expenditure, trend analysis, regression analysis, New Economic policy (NEP).

Introduction
Development expenditure (D.E.) is the expenditure of the government which helps in economic development by increasing production and real income of a country. Expenditure on economic service, expenditure on social and community services, grants to states are examples of developmental expenditures.
To finance this, the government borrows the funds from individuals, institutions and foreign investors. All the borrowings made by the government is known as Net Fiscal Deficit (N.FD.)
(N. FD = Gross Fiscal deficit – lending of the central government)

Literature Review

In India the concept of fiscal deficit was first introduced in 1991 and was defined as the sum of revenue deficit, capital expenditure less recovery of loans and other receipts. Since then, fiscal deficit has been a closely tracked parameter to measure the health of the Indian economy.

Sonika et al. (2016), Fiscal deficits and trends in India in the trend analysis found that the fiscal deficit of the Central Government rose sharply from 5.55% of GDP in 1980-81 to 8.13% in 1986-87 and stood at 7.61% of GDP in 1990-91. It significantly increased the capital expenditure and reduced revenue receipts. Post 1991 period had the private sector share the burden of long-term development and contribute to capital receipts in the form of disinvestment.

Roberto (2010), What Are the Effects of Fiscal Policy Shocks in India? using simple structural and recursive vector auto regression (VAR) methodology (for 1996Q2-2009Q3) tries to study the effectiveness of fiscal policy in India. The fiscal data is based on the national accounts – CGA (Controller General of India) and the foreign variables are taken from IMF's World economic outlook (WEO) and 3-month LIBOR. All variables enter the VAR in natural logarithms. The time series is found to be I (1) and non-stationary. The results show that the Development spending multiplier is greater than 1, suggesting that composition of spending matters. The uncertainty surrounding this multiplier is found to be large, probably reflecting the volatility of development spending. Interestingly, the effect persists even after 16 quarters, suggesting some crowding in effects of that type of spending. On the other hand, the government spending multiplier is 0.5 crowding out the effects of private investments. Also, the tax revenue multiplier is twice as large as the current spending (development) and remains significant for 8 quarters. The findings suggest that the growth of spending may be preferable to tax rise since the latter has a significant negative effect on growth in the long-term. Despite the unique approach of using the multipliers concept, the study is limited for a very short time period of 1996-2009 only.

Ramaprasad et al. (2016), Understanding the null-to-small association between increased macroeconomic growth and reducing child under nutrition in India: role of development expenditures and poverty alleviation, investigate the two commonly hypothesized pathways through which macroeconomic growth is expected to reduce child under nutrition: (1) an increase in public developmental expenditure and (2) a reduction in aggregate income-poverty levels. The study is conducted for the time period of 1992-93 and 2005-06; different data sources are NHFS, RBI and government committee reports. Here, Per capita state domestic product and reduction are taken as the indicators of development. Estimation is done using multilevel logistic regression models with a log link function to exploit the latent association between economic variables at aggregate levels and under nutrition at the individual level. The model estimation is based on penalized quasi-likelihood procedures with first-order Taylor linearization. The study finds that between 1992–1993 and 2005–2006, state-level macroeconomic growth was not associated with any substantial increases in public development expenditure or substantial reductions in poverty at the aggregate level. In other words, the development expenditure is unable to help reduce child nutrition in Indian states. There are certain data constraints in the study – two distinct time periods are taken, inconsistencies and unavailability of data.

Anantha et al. (2016), Relationship between Fiscal Deficit Composition and Economic Growth in India: A Time Series Econometric Analysis. Study the composition of the fiscal deficit and its impact on economic growth. A long-term time series econometric analysis is done with the RBI database on Indian Economy, 2015. The time period considered is 1980-81 to 2012-13. In the study after studying the impact of fiscal deficit on economic growth, the fiscal deficit is then replaced by the effective fiscal deficit and revenue deficit. ADF unit root test is performed to check the stationary and the time series is found to be I (1). After this Johansen cointegration test is being performed to test the cointegration. Since cointegration is there, the Vector Error Correction (VEC) model is used for estimating the long run and short run relationships among the variables. The long-term estimate suggests fiscal deficit has a significant negative relation with GDP – supporting the neo classical argument. On the other hand, the fiscal deficit's relation with GDP in the short term is insignificant. Moreover, the

Effective Fiscal Deficit has a significant positive relation with GDP. Crowding of private investments are also visible here. The results support the 'Golden Rule' of public finance that if the deficit amount is used for capital expenditure purposes it significantly affects growth. The significant changes in the economy after 2013 are not being included in the study which may affect the current results of the study.

Srivastava, C. R. (2004), Fiscal Deficits and Government Debt in India: Implications for Growth and Stabilization. Find that when fiscal deficits are high in magnitude relative to GDP and largely structural in nature, the government's ability to mount counter cyclical interventions could be compromised, particularly when growth is below trend levels and intervention is needed. This was clearly experienced in the late nineties and the early part of the new decade.

Need and Significance of the Study

As stated above, the fiscal deficit has adversely affected the economy and has long term effects on capital expenditure. Moreover, the development expenditure though is increasing in post NEP period but has no significant impact on reducing poverty **Ramaprasad et al. (2016)**. As per the available literature, there is no comparative study analyzing the effect or relation of fiscal deficit with the development expenditure in particular; before and after the New Economic Policy. This gap is being filled by this study, materializing it for the further comparative analysis regarding the considered variables.

Objectives of the Study

a) Observing the trend analysis of developmental expenditure before and after NEP.
b) Observing the trend analysis of net fiscal deficit before and after NEP.
c) Estimating the regression line between the net fiscal deficit and development expenditure.

Hypothesis

The hypothesis is framed as follows:

H_0: There is no significant relation between the development expenditure and net fiscal deficit.

H_1: There is a significant relation between the development expenditure and net fiscal deficit.

Methodology

The analysis tries to study the relation between these two variables using trend analysis, scatter charts, line charts and regression analysis.

The comparison is made before (1980-81 to 1990-91) and after (1991-92 to 2022-23) the New Economic Policy of 1991.

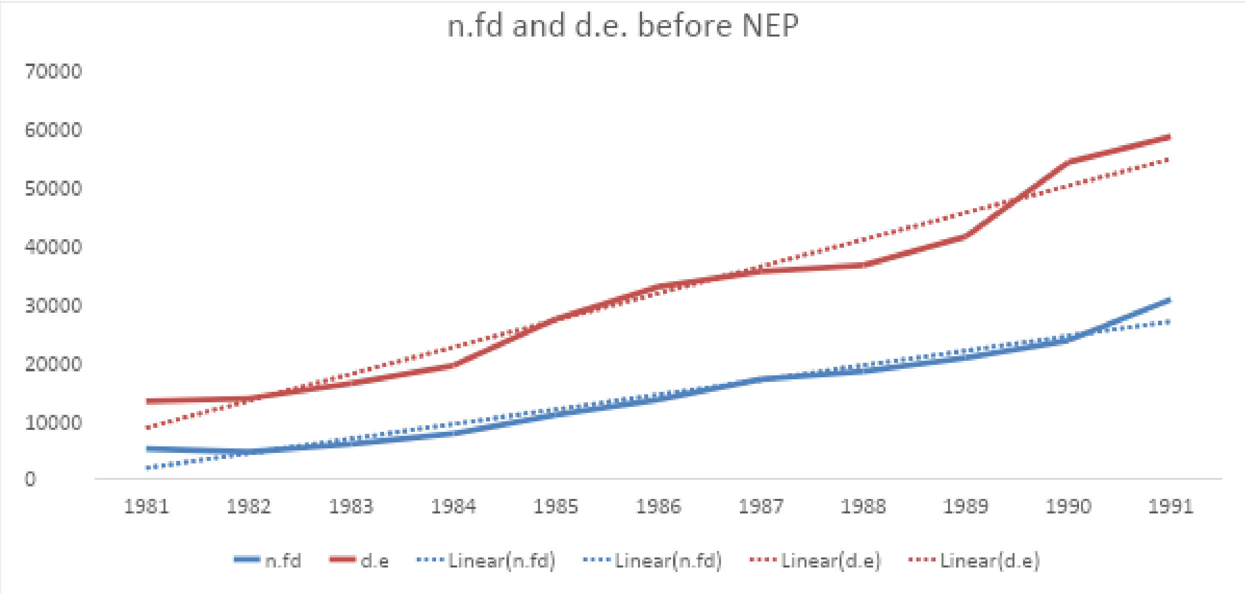
In part-1 of the study, trends of the two variables are being studied while in part-2 the regression analysis is performed.

Results and Discussion

PART – 1

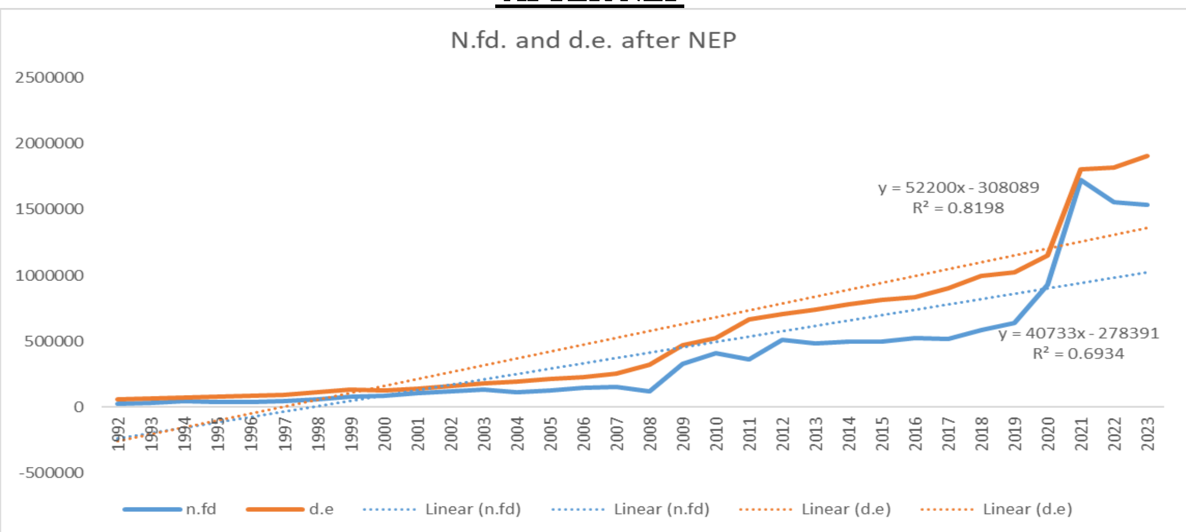
Trend analysis

BEFORE NEP



- Both Net fiscal deficit and Development expenditure shows an uptrend along the time factor, with development expenditure increasing at a faster rate than the fiscal deficit.
- The R^2 for both the variables is above 95% showing a good fit of the data points towards the trend line.
- There is a huge gap throughout the time period between the variables showing a good amount of non-developmental expenditure at this time slot.

AFTER NEP

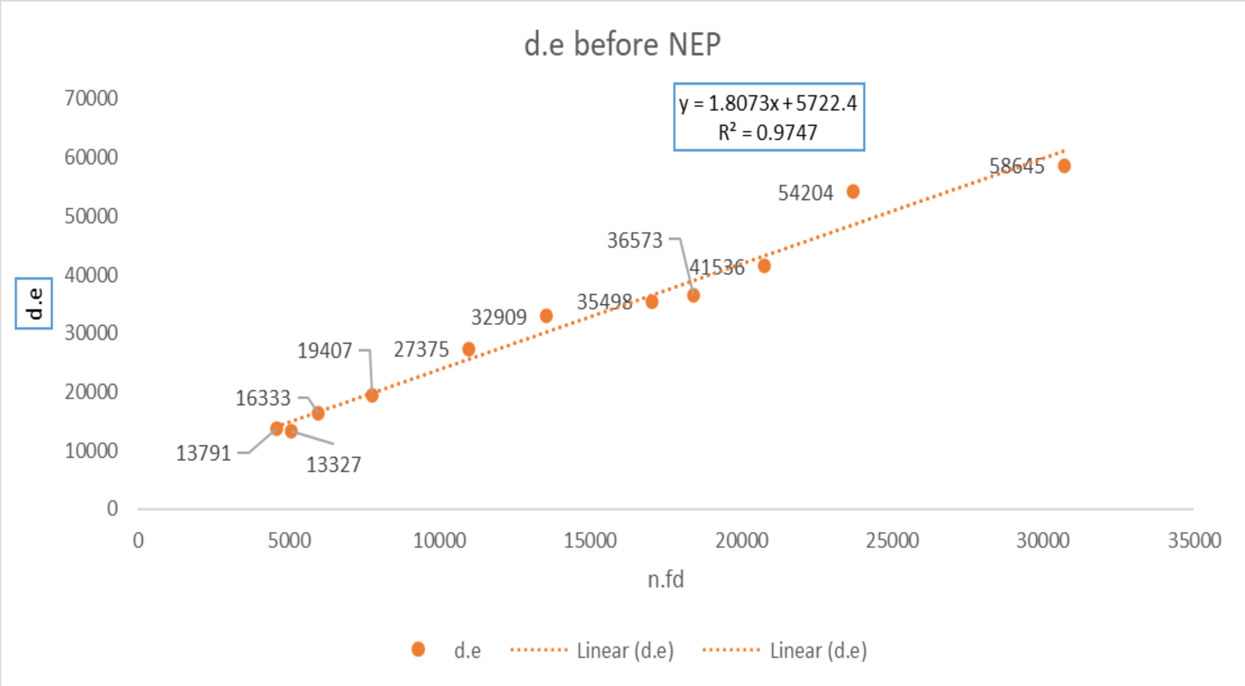


- Both Net fiscal deficit and Development expenditure shows an uptrend along the time factor, with development expenditure increasing at a faster rate than the fiscal deficit.

- The R^2 for both the variables is above 95% showing a good fit of the data points towards the trend line.
- After NEP. The gap is far more less between the variables reflecting the reduction of non-developmental expenditure during this time frame. However, from 2003 onwards this gap has widened until 2019-20. And in 2021, there is a sudden widening of the gap again

PART -2

In this section, fiscal deficit is considered as an independent variable and development expenditure is considered as a dependent variable.



The regression analysis is as follows:
SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.987275
R Square	0.974711
Adjusted R Square	0.971901
Standard Error	2614.685
Observations	11

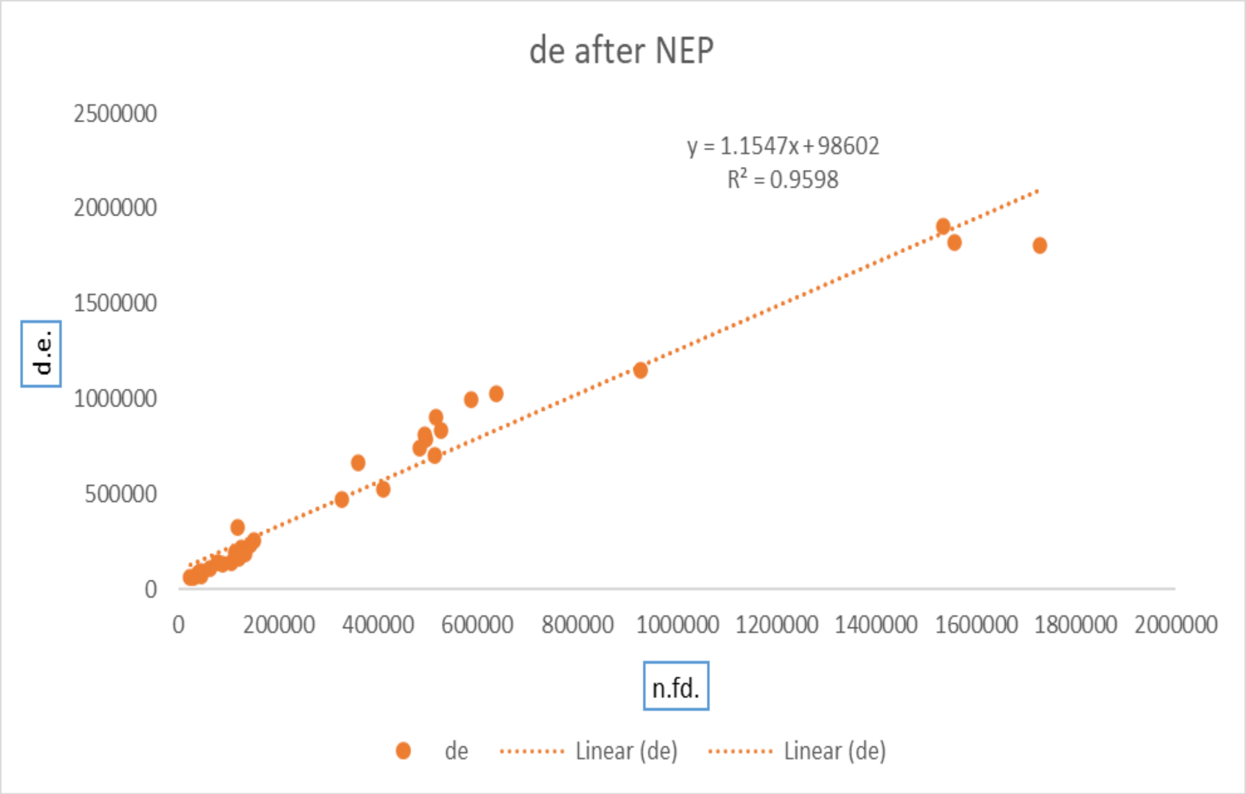
	Coefficients	Standard Error	t Stat	P-value
Intercept	5722.373	1605.98	3.563165	0.006089
n. fd	1.807264	0.097035	18.62485	1.7E-08

R^2 Square has a good %age of 97.4% - hence the data points are close to the regression line. t-value >2 indicating larger difference between sample and population mean. The probability of getting this value lies in the rejection region (since, p-value< 0.05 or is very low). Hence there exists a relation between dependent and independent variables.

Regression line:

DE = 5722.37 + 1.81 NFD

(3.56) (18.62) R^2 = (0.9747)



The regression analysis is as follows:

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.979692
R Square	0.959796
Adjusted R Square	0.958456
Standard Error	110234.6
Observations	32

	Coefficients	Standard Error	t Stat	P-value
Intercept	98601.75	25851.5	3.81416	0.000635

n. fd	1.154683	0.043147	26.7618 7	1.71E- 22

R Square has a good %age of 95.9% - hence the data points are close to the regression line. t-value >2 indicating larger difference between sample and population mean. The probability of getting this value lies in the rejection region (since, p-value< 0.05 or is very low). Hence there exists a relation between dependent and independent variables.

Regression line:

$$DE = 98601.75 + 1.15\,NFD$$
$$(3.81) \qquad (26.76) \qquad R^2 = (0.9598)$$

Findings And Conclusion

There exists a positive relation between the net fiscal deficit and the developmental expenditure of the central government.

Before the new economic policy, 1991, an increase in fiscal deficit was able to increase the development expenditure by approximately 2 times. Through the trend analysis it is observed that there is a gap between n. fd and d.e. trend line. It means a significant proportion of fiscal deficit is spent on non-developmental expenditure too.

While, after the new economic policy, 1991, approximately, the same amount of development expenditure is increased as that of the fiscal deficit. Through the trend analysis it is observed the gap between the development expenditure and fiscal deficit has fallen – indicating the use of borrowings for the development expenditure. However, with a rise in fiscal deficit, a much more amount of development expenditure is done after covid 19 – which the scatter plot clearly shows.

The results lie parallel to the previous studies done before and after the NEP. All in all, we can say that relatively, more and more of the fiscal deficit was utilized for the development expenditure after the reform when compared to the pre-reform time frame.

Suggestions

It is being suggested that the fiscal deficit should be controlled as far as possible and the borrowed money should be continued to be spent on the development expenditure so that an increased GDP can be facilitated for the long run. Fiscal policy can be a powerful tool for accelerating growth through increased development expenditure, a large part of which has been funded by the fiscal deficits of the country.

Future Scope

The paper compares the relationship between the fiscal deficit and developmental expenditure before and after the New Economic policy of 1991. With the found relation, the prospective research can extend the same by considering the composition of the development between Centre and States. Further, a comparative analysis can be done by looking into the states' expenditure practices. The present study relies on a simple trend analysis; including an econometric technique of time series analysis gives more concrete results.

Annexure 1

Table 1: Pre-reform Net Fiscal Deficit and Development Expenditure		
		(in ₹ Crores)
Year	**Net Fiscal Deficit**	**Development Expenditure**
1980-81	5110	13327
1981-82	4591	13791
1982-83	5973	16333
1983-84	7770	19407
1984-85	10972	27375
1985-86	13544	32909
1986-87	17036	35498
1987-88	18431	36573
1988-89	20770	41536
1989-90	23722	54204
1990-91	30692	58645

Source: Handbook of statistics, RBI
Economic Survey of India, 2023

Annexure 2

Table 2: Post-reform Net Fiscal Deficit and Development Expenditure		
		(in ₹ Crores)
Year	**Net Fiscal Deficit**	**Development Expenditure**
1991-92	24622	59313
1992-93	30232	65479
1993-94	45994	72464
1994-95	40313	82803
1995-96	42432	84427
1996-97	46394	94197
1997-98	63062	110994
1998-99	79944	137257
1999-00	89910	129151
2000-01	107854	139386
2001-02	123074	159364
2002-03	133829	184197
2003-04	115558	195428
2004-05	126252	214955
2005-06	145743	229060
2006-07	151245	255718
2007-08	120714	325670
2008-09	329024	471399
2009-10	411448	528242
2010-11	361026	666069

2011-12	514103	705321
2012-13	484450	742417
2013-14	496157	784504
2014-15	495245	813813
2015-16	527289	835019
2016-17	516438	899369
2017-18	588668	998201
2018-19	639249	1025979
2019-20	927553	1153187
2020-21	1727529	1808981
2021-22	1557809	1821603
2022-23	1535430	1908663

Source: Handbook of statistics, RBI
Economic Survey of India, 2023

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